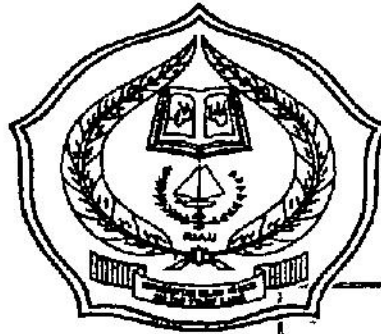


**THE INFLUENCE OF USING SEMANTIC MAPPING TECHNIQUE
ON STUDENTS' WRITING ABILITY AT THE SECOND
YEAR OF SMAN 2 ROKAN IV KOTO**



By

M I L I K
PERPUSTAKAAN UIN AL - QADIMAH
SULTAN SYARIF KASIM RIAU
NO. <u>2010 143 PB1</u>
TGL <u>23 Jun 2010</u>
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**THE INFLUENCE OF USING SEMANTIC MAPPING TECHNIQUE
ON STUDENTS' WRITING ABILITY AT THE SECOND
YEAR OF SMAN 2 ROKAN IV KOTO**

Thesis

Submitted to Fulfill One of the Requirements
For Undergraduate Degree in English Education
(S.Pd)



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Pekanbaru, Muharram 29, 1431 H
January 15, 2010 M

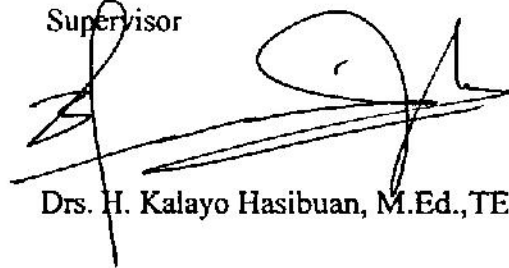
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Pekanbaru, Rabiul Akhir 30, 1431 H
April 15, 2010 M

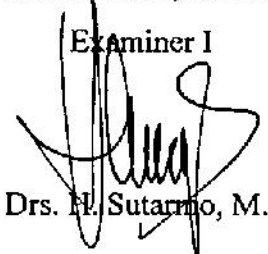
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ACKNOWLEDGEMENT

Bismillahirrahmanirrahim
Assalamu'alaikum warahmatullahi wabarakatuh

Praises belong to Allah Almighty, The Lord of Universe, who has rewarded the researcher's time, energy, opportunity, financial, health and the most is believe. Shalawat and gratitude is always to our prophet Muhammad, Peace Be upon Him. Due to Allah, the researcher can finish and complete this paper to fulfill one of the requirements for the award of undergraduate degree at English Education Department of Education and Teacher Training Faculty of State Islamic University Sultan Syarif Kasim Riau.

In conducting this research and arranging this thesis, the researcher has obtained significant helps, suggestions, encouragements, motivation, supports and conveniences from many sides. Therefore, the researcher would express his thankfulness in depth to:

1. Prof. Dr. H. M. Nazir, the Rector of UIN Suska Riau and all staffs who have dedicated his time to increase this university development.
2. Dr. Hj. Helmiati, M. Ag., the Dean of Education and Teacher Training Faculty of UIN Suska Riau and all staffs for their kindness and services during my study.
3. Dr. Hj. Zulhidah, M. Pd., the Chairperson of English Education and Bukhori, S.pd.I., M.pd., the Secretary of English Education Department as well who has guided the writer in the accomplishment of the thesis

4. Drs. H. Kalayo Hasibuan, M. Ed.-TESOL, as the writer's supervisor who has encouraged and motivated the writer to complete this thesis.
5. All lectures who have taught and contributed their knowledge to me.
6. My beloved family, particularly to my beloved Father, Abdurrahman (Alm.) (thank you my beloved father mygod given you good place there), my beloved Mother, Rumiah (thanks for all the holly and great praises); my beloved grandmother, Ratna (thank for your praying, support and material), to my brother Ali Yusuf, S. Sos., and Abdul Raki (thank you for your support and your material to accomplish this thesis too. I love you all), and also My Nephew (Abid Al- Fares and Zaskia Ayuni), to Ari, Amnah, Elvia, Fajri, Budi Irawan. Thanks for your love and don't forget to study hard.
7. My soulmates (to all my classmates PBI VIII F; Academic Year 2005) especially Delpidon (my best friend), Ridwan, Taufik Ihsan, A. Syarif, Imil, Melda Yeni, Yono, Imam, Fajril, Budi etc. and to my all friends Muklisin, Ijup, Adi, Nanda, Risel, Rini, Ika Eliska, Rahmad, Cindy, Imelda Yusuf, Rani rian sari, Mu2n, Siti sulastrri, Dewi etc. My roommate (Jamil and Aziz), I can not say their name one by one. I always remember you all friends.
8. Mam Eka Puspita, S. Pd., My English Teacher in SMA N 2 Rokan IV Koto, thanks for your participation and helps, may be without you I can not do the research in SMA N 2 Rokan IV Koto.

9. All of the second year students of SMA N 2 Rokan IV Koto, thanks for your participation in doing the test.

10. For all the people that have given her great support in doing and finishing this thesis so on. This can not be written one by one. Thanks a lot for you all guys.

Finally, I realize that this paper is still far from being perfect. Therefore, comments, critics, and constructive suggestion are really needed and appreciated.

My Allah Almighty, the Lord of the Universe, bless them all.

Pekanbaru, Mey 20, 2010

The Writer

Cahyadi

ABSTRACT

This paper is entitled "*The influence of using semantic mapping technique in teaching writing toward student's writing ability at the second year of SMAN 2 Rokan IV Koto*". Many scientist both native and second language say that writing can be learned by using good attitude, doing the process of writing itself and choosing good method in teaching and learning process. But the students in SMAN 2 Rokan IV Koto still get difficulties when they asked to make writing especially in making a short paragraph, because the teacher there still used the classical method in teaching and learning process.

This research has a formula of the problem that is there any significant influence of using semantic mapping technique toward students writing ability. The objective of this research is to find out whether there is significant influence of using semantic mapping technique toward student's writing ability or not at the second year of SMAN 2 Rokan IV Koto.

In this research the writer took two classes as sample, one class for experimental group and one class for control group. Before giving the treatment both of them were given pre- test and post- test were gotten after the treatment.

The technique of the data collection employed the test. Test is used to know the student's writing ability at the second year of SMAN 2 Rokan IV Koto.

The technique of the data analysis is use quasy- experiment research. To analyze the students' score the writer uses t- test.

$$t_o = \frac{M_x - M_y}{\sqrt{\left(\frac{SD_x}{\sqrt{N-1}}\right)^2 + \left(\frac{SD_y}{\sqrt{N-1}}\right)^2}}$$

The score is compared with the t- table by using of the degree of freedom "df". The formula is follows:

$$df = (N_1 + N_2) - 2$$

Based on the data analysis, the writer can make a conclusion that, there is significant influence of using semantic mapping technique toward students writing ability and the percentage of increasing 20.45 %. Therefore, it means that the first hypothesis or Ha is accepted and the second hypothesis or Ho is rejected.

ملخص

جعيدى 2009 : تأثير استيعالية semantic mapping technique فى قدرة الكتابة التلاميذ بالمدرسة العالية الحكومية الثانى (2) ركن VII كوطا.

الرمز المشكيلة فى هذا البحث، حل له تأثيرا استيعالية semantic mapping technique فى قدرة الكتابة التلاميذ بالمدرسة العالية الحكومية الثانية (2) ركن VII كوطا. وموضوعى البحث ليعرف هل له أو عدم تأثير semantic mapping technique فى قدرة الكتابة التلاميذ بالمدرسة العالية الحكومية الثانى (2) ركن VII كوطا. فى هذا البحث، اخذ الباحث فصلين لكى يكون مثالا، احد منهما فصل بتجربة، ثم الفصل الثانى ضبط الفصل، قبل اعطى علاجا الى الفصل التجربة. وهذا فصلين اعطى الباحث الامتحان اول، والامتحان الاخير اعطاه الباحث بعد فصل التجربة. معطى العلاج وهو semantic mapping technique اتقنى اجتماع البيانات استعمل الاختبار، غرضه ليعرف قدرة الكتابة التلاميذ فصل الثانى بالمدرسة العالية الحكومية ركن VII كوطا. التقنية تحليل البيانات وهى كمثال التجربة غير الاصل أو التجربة، وطريقة التحليل البيانات استعمل الباحث بالرمز $t_{des} = \frac{Mx - My}{\sqrt{\left(\frac{SDx}{\sqrt{N-1}}\right)^2 + \left(\frac{SDy}{\sqrt{N-1}}\right)^2}}$ ثم يفرق با table وباستعمال the degree of freedom بالرمز فيما يلى : $(df) = (N_1 + N_2) - 2$ من تحليل البيانات، عرف الباحث مرد تأثير من semantic mapping technique فى قدرة الكتابة التلاميذ فصل الثانى بالمدرسة الحكومية الثانى ركن VII كوطا. بالحسم الترقية على العقل 20,45. وبالمعن فرضية اولا مقبول وفرضية الثانية مردود.

ABSTRAK

Judul Skripsi ini adalah: "*Pengaruh Penggunaan Semantic Mapping Teknik Terhadap Kemampuan Menulis Siswa Di SMAN 2 Rokan IV Koto.*"

Penelitian ini mempunyai satu rumusan masalah yakni: apakah ada pengaruh semantic mapping teknik ini terhadap kemampuan menulis siswa di SMAN 2 Rokan IV Koto. Dan objektif dari penelitian ini adalah untuk mengetahui ada atau tidaknya pengaruh semantic mapping terhadap kemampuan menulis siswa di SMAN 2 Rokan IV Koto.

Dalam penelitian ini penulis mengambil 2 kelas sebagai sample, satu kelas untuk kelas yang di uji cobakan dan satu lagi kelas untuk di kontrol. Sebelum memberikan treatment kepada kelas uji coba, kedua kelas kontrol dan uji coba di beri test awal atau test bebas test terakhir di berikan setelah kelas uji coba di beri treatment yakni: semantic mapping teknik. Teknik pengumpulan data penulis menggunakan tes, ini bertujuan untuk mengetahui kemampuan menulis anak kelas XI SMAN 2 Rokan IV Koto. Teknik analisa data adalah berbentuk percobaan tidak murni atau percobaan bebas dan cara menganalisa data penulis menggunakan rumus t – test:

$$t_o = \frac{M_x - M_y}{\sqrt{\left(\frac{SD_x}{\sqrt{N-1}}\right)^2 + \left(\frac{SD_y}{\sqrt{N-1}}\right)^2}}$$

Kemudian hasilnya di bandingkan dengan t – tabel dengan menggunakan the degree of freedom dengan rumus:

$$df = (N_1 + N_2) - 2$$

Berdasarkan data analisa, penulis dapat menyimpulkan bahwa ada pengaruh dari semantic mapping teknik terhadap kemampuan menulis siswa kelas XI SMAN 2 Rokan IV Koto dengan persentase peningkatan sebanyak 20,45 itu artinya: hipotesis pertama di terima dan hipotesis kedua di tolak.

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And Mechanics (Reader II).**



CHAPTER I

INTRODUCTION

A. The Background

English is one of international languages used by the people around the world. Then, mastering English is one of the obligations if we do not want to be left behind. In Indonesia, English is taught as foreign language (EFL) starting from elementary school to university.

Teaching English in Indonesia covers language skills that should be mastered by learners, because the ability in the language skills is influenced by the learners to understand and use the language itself. According to Polsky (2007) says that the ability of the students to read and write is strongly influenced by the ability to understand and use language, and Language skills. He also states that the learners who are good listeners and speakers tend to be strong readers and researchers. Moreover, among four language skills are correlated each other.

One of the language skills that should be given more attention in language learning is writing. Because, most of people in both native and second language said that writing is complex one. Hughey (1983: 3) says that certain psychological, linguistic, and cognitive factors make writing a more complex and difficult discourse medium for most people, in both native and second language.

However, it is not reasonable to say that writing never mastered by the people, because writing can be learned by using good attitude toward the writing itself..

SMAN 2 Rokan IV Koto is one of the state senior high schools in Rokan Hulu. English is taught in the first grade, the second, and the third grade. English has been well known by students in SMAN 2 Rokan IV Koto. KTSP (Education Unit Level Curriculum) in which school or an institution has authority to implement system of learning and teaching activity for particular lesson or subject. There is on curriculum that is used in SMAN 2 Rokan. KTSP especially is used to the first until the third grade. It has been applied since 2007 until now. The teacher applied genre based approach, which is demanded by department of education (DIKNAS). In implementing this approach, there are four steps that teacher must do, namely:

1. Building knowledge of the field; the teacher explains the vocabularies, tenses and text components.
2. Modeling of the text; the teacher presents or model the certain texts.
3. Joint construction of text; the students compose texts in group.
4. Independent construction text; the students compose the text individually.

In addition, it is based on the English KTSP curriculum for English in Senior High School by concerning the genre of texts. In general, there are three kinds of genre they are narration, description, and exposition.

1. Narration tells us what happened. It tells a story. For example: novels, short stories and biographies.
2. Description tells how something looks or feels or sounds. It talks about such features as size, shape, color, sound, or taste.
3. Exposition is writing that explains something. It often answers the questions what, how, and why. Its purpose is to present ideas to make the ideas as clear as possible.

Referring to KTSP and English syllabus of SMA and competency based curriculum for SMA, explain that the aims of teaching and learning writing in Senior High School are;

1. The students can write the summary of the text by using the good grammar according to the guidance that is given in the form of list of questions and table.
2. The students can write the paragraph form of narration and description.
3. The students can write formal and informal letters.

Rationally, through the implementation of this approach, the students can write a descriptive paragraph well. Frequently, most of the students are problematic in developing a title of a paragraph. Most of them get difficulties to write the sentences because they do not know how to develop a title given. On the other hand, they do not have easy technique in writing.

Based on the preliminary research, the researcher found some students who consider that writing is a difficult one and unpleasant activity, especially at

SMAN 2 Rokan. They do not know how to express their ideas in writing because they do not have easy techniques which may help them to develop a topic becomes a paragraph in which the sentences are woven together.

An effective technique of writing should be used to stimulate the students' interest and to enrich their vocabularies. Thus, the goal of English learning in Indonesia can be reached. It is difficult to task for the students. However, there are some techniques in writing that may increase the learners' motivation, they are as follows:

1. Brainstorming. In this technique, the teacher asks students to generate their ideas by asking as many questions as students can think of about their subject or topic.
2. Free writing. This is done if students do not know what to write about a particular subject or when students are blocked in their composition. In free writing, students are asked to write as fast as they can for about ten minutes. Ask the students not to worry about spelling, punctuation, erasing mistakes, or finding the exact words-just write without stopping until the words needed come.
3. Making a list. In this technique, students are required to write out a list of words as many difference items as they can think of concerning their topic. This is aimed to generate details and accumulate as much raw materials for writing as possible.

4. Preparing a scratch out line. In this technique, teacher asks students to think carefully about the exact items that they want to support their points, and about the exact orders in which they want to arrange those items.

To solve the student's problems in writing, the researcher as well as researcher suggests the semantic mapping technique as guidance in developing writing skill. The semantic mapping technique is never used in teaching writing at SMAN 2 Rokan, but the technique used by the teacher is making a list. The terms of semantic mapping technique and making a list are almost having the same meaning. Here, researcher just focuses on the semantic mapping technique, which can be used to generate material for a paper.

Semantic mapping is "a visual representation of knowledge, a picture of conceptual relationship" (Antonacci, 1991:174). How to get students to focus not just on the individual details but also on the structure of a text, Students who use semantic mapping manifest considerable improvement written expression and vocabulary development. Semantic mapping also might help in the conceptualization of paragraph and short-essay structure.

In learning writing, the semantic mapping strategy is a system of words cluster drawing, and then, these words will be developed become a coherent sentences in a paragraph. It is one of the ways or the alternative one to motivate the students in getting ideas, developing their writing and it can create an enjoyable atmosphere in the classroom. According to Maggard as cited in zaid

(2006) states that semantic mapping is good strategy in teaching four language skills. It means that semantic mapping is an effective way for teacher to increase their students' writing ability.

Concerning to the problem above, the researcher is interested in conducting an experimental research based on several symptoms below:

1. Some of the students did not use grammar correctly in writing a paragraph.
2. Some of the students did not use appropriate vocabulary in writing a paragraph.
3. Some of the students could not construct the text based on the instruction in writing a paragraph.
4. Some of the students did not have easy technique in writing
5. Some of the students are still confused to generate their ideas to make a paragraph.
6. Some of the students are afraid of making mistakes if they write English.
7. Some of the students are lacking of effort to improve writing skill.
8. Some of the students get low score in writing test.

From above symptoms, the researcher is interested in conducting a research entitled: **"THE INFLUENCE OF USING SEMANTIC MAPPING TECHNIQUE ON STUDENTS' WRITING ABILITY AT THE SECOND YEAR OF SMAN 2 ROKAN IV KOTO"**.

B. The Problem

1. Identification of the Problem

1. What is the influence of semantic mapping technique toward writing students writing ability?
2. Can semantic mapping improve students writing ability?
3. What technique did the students use in writing?
4. Why are the students confused to generate ideas to make a paragraph?
5. What factors make the students afraid of making mistakes if they write English?
6. What cause the students lack efforts to improve writing skill?
7. Why did the students have low score in writing subject?

2. Limitation of the Problem

It is necessary to limit this problem in this paper. The writer focuses only the influence of using semantic mapping technique on students' writing ability at the second year of SMAN 2 Rokan IV Koto.

3. The Formulation of the Problem

The problem of this research can be formulated in the following question:

-Is there any significant influence of semantic mapping technique use on students' writing ability?

C. The Reason of Choosing The Title

1. The topic is very important to be research because it is very crucial in teaching learning process.
2. The writer wants to prove the truth of scientist statement. That there is significant influence of using semantic mapping technique in teaching learning process on students writing ability.
3. As far as the researcher is concerning to this problem, it has not been investigated yet.

D. The Objectives and the Needs of Research**1. The Objectives of the Research**

- To find out, if there is significant influence of semantic mapping technique use on students' writing ability.

2. The Needs of the Research

1. To provide some information to English teachers or students concerning with the role of semantic mapping technique toward students' writing ability.
2. To enlarge the researcher's knowledge about the research especially for the researcher's insight scientifically to the topic of semantic mapping technique use.

E. The Definition of the Terms

1. The Influence

It is the effect that something has on the way a person thinks or behaves or on the way that something works or develops. (Hornby. 2000:666). whereas, in this research it means a study to find the influence of semantic mapping technique use to develop the 'students' writing ability.

2. Semantic Mapping Technique

Masters Mori & Mori (1993) discuss the use of semantic mapping strategy. They define semantic mapping technique as being used to motivate and involve students in thinking, reading, and writing aspects. It enhances vocabulary development by helping students new information with previous experience. In this study, the Semantic mapping is a technique to arrange words in map or graphics to be a descriptive text paragraph.

3. Teaching

Teaching is the work of the teacher (Hornby, 2000:1333). In this research, the teaching writing is giving information to the students on how to use the semantic mapping technique in writing Activities.

4. Writing

It is the activity of writing (Hornby, 2000: 1500). Writing is an Activity that person does to express his or her ideas, feeling, or something by

using written language. In this research, writing is an activity of students to write a short paragraph from the words in map or graphics.

5. Ability

A level of skill, or intelligence (Hornby, 2000:2). It is concerning with students' skill in writing a short descriptive Text paragraph.

6. Writing ability

It is a person's ability in expressing his or her ideas, feeling or something to others by using writing language. Here, it is meant that a person's capability in expressing his or her ideas, feeling, or something to other by writing.



CHAPTER II

THEORETICAL FRAMEWORK

A. The Theoretical Framework

1. The nature of writing

According to Langan (1986: 89-90) suggests that people who want to study about writing are prohibited to believe that writing is the natural gift. Because people with this attitude will think that, they are only one, for whom writing is an unbearably difficult activity. Even the result of the attitude is that people do not do their best when they write, thus their writing fails chiefly, because they have brainwashed themselves to think that they do not have the natural talent needed to write, until their attitude changes, they probably do not learn how to write effectively.

He also states that realistic attitude about writing should build on the following two ideas:

1. Writing is a hard work for almost every one.

Writing is not automatic process. We will not get something for nothing, and we cannot expect something for nothing, the competence of writing result only through planning hard work through determination, sweat, and head on battle.

2. Writing is a skill

Almost the same with the other skills, we can learn it if we decide that we are going to learn and then really work on it. Based on the statement above, the researcher concludes that language skills such as reading, speaking, listening, and writing are important to be mastered by the learners to support language learning process maximally. But, in other word, writing is more respectable by the learners because writing is not only developing their idea in a paragraph but also arranging it in a process of writing.

Arlove (2004) in Fauziah, (2004:3) decides that writing is not a single act, but a process composed of several steps and it is divided into five steps.

1. Prewriting
2. Planning
3. Drafting
4. Revising
5. Proofreading

Writing skill involves the way to write a paragraph or essay, and to express ideas that come from our mind, but it is difficult to be a good researcher. Not all of people can write well, some of them find difficulties in writing.

Writing is one of the Language Skills in which many people or students feel necessary to do it easily and quickly without extended thought. It is also an important subject that should be taught in senior high school level. Writing skill cannot be separated from other aspects of language learning.

Writing is one of the productive language skills that improves students' language ability and stimulates the students' cognitive in learning writing which is useful for the students who learn a language. However, writing well can be a problem for students in writing class. In fact, writing is often unpredictable process. According to petty (1980) in Tio, (2004: 3) mentions that writing is as the mental and physical act of forming letters and words, writing needs a process of expressing thought and feeling, thinking of shaping experiences. Eventhough the students engage in planning, drafting, or revising, it is not simply putting words into sentences and sentences into a paragraph because the students should keep their purposes and think about the fact that they have to select words, which are relevant to their writing topic.

According to Nunan (1991: 88), the learner's purposes of writing, which transcend, are producing text from teacher. However, the students' concerns and interests are acknowledged can be developed rapidly through writing skill. In which forming words to be a coherent sentence in a paragraph can practice it.

Writing activity produces words to become a sentence and create sentences into a paragraph. According to Langan (2001: 12), a paragraph is a series of sentences that develop one idea. Idea is usually states in general form in one sentence, called the topic sentence. That sentence tells your audience what to express in the paragraph. The rest of the sentences in the paragraph provides the reader with specific explanation or proof of the general topic sentence. The

supporting sentences help the reader to understand more clearly what the writer means.

Generally, in writing ability, we have to know the components of writing. According to Aminah (2005) in Hartono, (2006:9) states that there are five components of writing, they are as mentioned in the following points:

1. Content

It means that ability to think creatively and develop thought, excluding all irrelevant information.

2. Organization

Fluent expression, ideas clearly states, well organized, logically sequenced and cohesive. An essay is coherent if its paragraphs are woven together or flow into each other. An essay, which lacks of unity or orderly movement will not be coherent, since readers can not move easily from one paragraph has no clear relation to the first.

3. Vocabulary

In writing, there should be sophisticated range, effective word, idiom, word choice and its usage.

4. Language Use

Grammar or a language is description of speaking and writing habits of the people who use it. In composing paragraphs or texts, the knowledge of grammar is very important. Without them, writers will not be able to use it. So, the readers may not catch points of writer's messages.

5. Mechanics

Essay writing is mechanically good if the writer demonstrates mastery of conventions, good spelling, punctuation, capitalization and paragraphing and also handwriting.

The ability to give ideas in writing form is not easy, especially for students. They should have a good feeling in everything and have an interesting in a paragraph. Therefore, it is necessary for them to guide, and to control their ideas, which can be applied in teaching writing. To help the students, in this case, designing the system is absolutely needed, which is used by the writer to develop their writing ability known as the semantic mapping.

2. The Nature of Semantic Mapping

Semantic mapping is one of teaching strategy that can be used in teaching writing. There are some definitions of semantic mapping explained by some experts, such as : according to Antonacci (1991 : 174) semantic mapping is “ a visual representation of knowledge, a picture of conceptual relationship” , Sinatra, Stahl-Gemake, and Berg (1984 : 22) says that semantic mapping “ a graphic arrangement showing the major ideas and relationship in text or among word meaning” , and according to Johnson, Pittelman, and Heimlich (1986 : 779) semantic mapping is “ a categorical structuring of information in graphic form ”.

Based on studies by Crow and Quigley (1985) and Brown, and Perry (1991) found that semantic mapping processing was an effective vocabulary learning strategy. Students who use semantic mapping manifest considerable improvement in written expression, and vocabulary development. A series of studies, principally by Carrel, examined how schema theory and semantic mapping can improve the writing skills of ESL students.

The semantic mapping is a visual strategy, which shows the major ideas of a certain topic and how they are related (Raymond C. Jones, 2006). Then, words are related to other words or sentences to other sentences. According to Maggard as cited in zaid (2006) states that semantic mapping is good strategy in teaching four language skills. Heimlich, J. E., & Pittelman, S. V. (1986) explained that a semantic map is one type of graphic organizer. It helps students visually to organize and graphically show the relationship between one piece of information and another.

In writing, the planning phase is very important part of the writing process for writer. It helps them to generate and organize their ideas before they begin to write. They can write their ideas about a topic in maps or graphic. They can start the subject in a few words in the central to the top and then they can put them in ellipses, boxes, or circles.

According to Masters, Mori, & Mori (1993) discuss the use of semantic mapping strategy. They define semantic mapping technique as being “used to motive and involve students in the thinking, reading, and writing aspects. It

enhances vocabulary development by helping student's link new information with previous experience". Through clustering words in the semantic mapping system, we can see how the ideas are related to each other, because it is one of the techniques of powerful ideas generation besides free-writing, questioning, and making a list.

Based on the explanation above, the researcher concludes the contribution of semantic mapping technique has some advantages, they are as follows:

1. It can help the students generate their ideas about a topic given.
2. It can improve note taking, and create thinking skill.
3. It helps to develop reflective thinking because the students have opportunity to determine, guide and rearrange information, which is given in order to increase concentration and motivation for the students in writing.
4. It is a good technique for writing.

3. How to Use the Semantic Mapping

The procedure of a semantic mapping may be used: As a pre-assignment strategy to active students prior knowledge or to help the teacher in assessing the students' writing ability to do the assignment; as a strategy to allow students to record what they are learning during assignment; and as a post-assignment strategy to allow them to integrate or synthesize what they have studied. In

totality, a semantic mapping activity assists students in viewing learning from an organized versus a fragmented perspective.

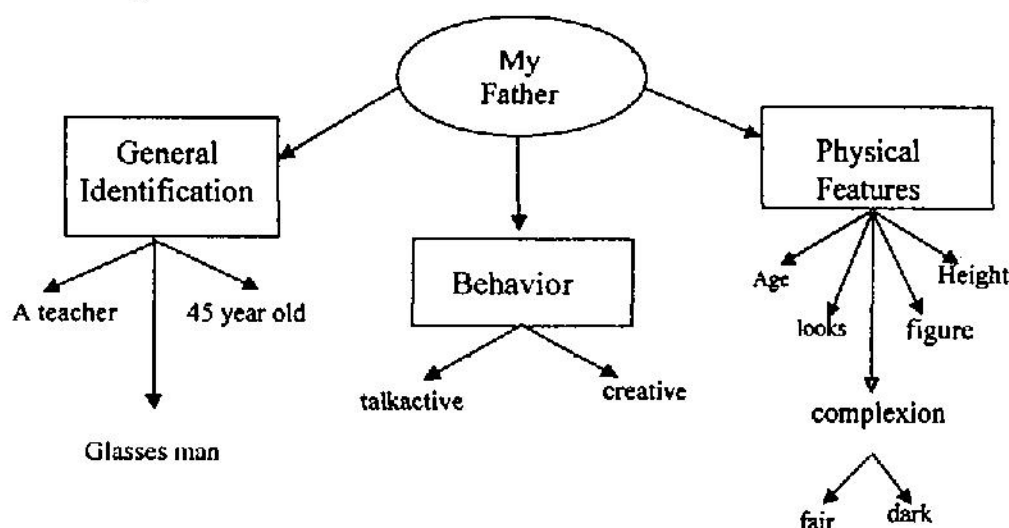
In using the semantic mapping, the students should move from one idea to another then back to first idea and forward again to a new idea and so forth. The ideas of the students can be changed completely, or clustered into sentences or paragraph form. They have to concentrate on ideas about the topic, without thinking about grammar. But, after they finish their writing, they will check it.

However, to show the relationship between ideas and small particular fact about a topic can use circles, boxes, lines, or ellipses. Master, Mori, & Mori (1993) discuss the use of semantic mapping strategy. They define semantic mapping technique as being “used to motivate and involve students in the thinking, reading, and writing aspects. It enhances vocabulary development by helping student’s link new information with previous experience.” The instructional sequences of semantic mapping are as follows:

1. Select a word central to the top
2. Display the target word.
3. Invite the students to generate as many words as possible that relate to the target word.
4. Have the students write the generated words in categories.
5. Have the students label categories.
6. From this list, construct a map.

7. Lead the class in a discussion that focuses on identifying meanings and uses of words, clarifying ideas, highlighting major conclusion, identifying key element, expanding ideas, and summarizing information.

According to Maggard (2009), semantic mapping strategy can be painted to be diagram bellow:



This diagram in the semantic mapping technique; we make it before we write a descriptive text paragraph.

From the semantic mapping above, it can be elaborated in this description. My father is as the central topic, and then some key words are related to the topic as the supporting ideas. They are general identification, behavior, and physical features. From the general identification, it shows the mapping pointing that a teacher and 45 years old. Then from behavior there are two mappings; talkative and creative. From the physical features, there are some

supporting words; age, looks complexion, figure, and height. Then, supporting ideas for complexion are fair and dark. Thus, it can be a short paragraph as follows:

“My father is a teacher, he is 45 years old. He is talkative teacher at the school. I like the way of his teaching, because he is creative one. He always gets the award from the school and government. He always wears the glasses because his eyes are not well. But, he still has the good spirit in his job. Even though his age is 45 years old, his figure is still fit. He is complexion one, his skin is between fair and dark. But, he is still handsome father for me”.

From the illustration above and the discussion of the procedure followed, it can be seen that semantic mapping incorporates many of the aspects of Communicative Language Teaching which have been found to benefit students in learning a second language:

1. Semantic mapping is interactive because in drafting the map, students work with each other both before and after the targeted language topic. Its creation entails total student involvement; the students are active participants throughout the development of the map.
2. Semantic mapping allows for sequential negotiation. First there is interpersonal negotiation through students' suggestions and categorization. Finally there is a return to interpersonal negotiation as the class modifies the pre-assignment and personalized maps into the post-assignment map. The interactive process of student negotiation of meaning has merged the interpersonal or social aspect of language

development (Savignon, 1983) with the intrapersonal, reflective aspect of language learning (Tarvin and Al-Arishi, 1991).

3. It is an information-gap activity since students must fill in gaps in the map and in their personal schemata of the topic as the map takes shape.
4. It is a predictive activity because in the pre-writing phase, the students' discussion basically anticipates what will appear in the writing material.
5. It is student centered because the semantic map makes use of the students' prior knowledge and because students control the input at each stage of the map's building.
6. It is teacher- friendly because it allows the EFL teacher unobtrusively to pre-assess the students' write ness to do an assignment, take immediate steps (as in vocabulary introduction) to enhance their preparation, and to post-evaluate how well the students integrated or synthesized what they had studied.
7. Finally, it is an integrative activity, since it allows students to connect previous knowledge with the new knowledge, there by expanding their reservoir of knowledge through that interrelationship.

4. The Factor Influencing the Writing Ability

There are some factors that influence writing ability. One of them is lacking of practice. This is the dominant factor that can obstruct writing ability. If the students are lacking of practice on their writing, they will not be able to

write English well although they have good techniques and good teacher. Furthermore, lacking of self-confidence can also obstruct writing ability.

The influential factors of students' writing ability may not be separated with the influential factors of learning. Sukarni and Muspita (1992: 27), say the influential teachers in learning are as follow:

1. Internal factor

These factors are from the students themselves, in which it consists of psychological aspects . such as intelligence, attitude, talent, and motivation.

2. External factor

These factors consist of social environment such as family, teachers, friends, staff, and societies and non-environment such as house, school, equipment, and atmosphere.

B. The Relevant Research

As a Matter of fact, there are some preliminary researchers dealing with the analysis of the students' ability in writing as follows:

Hastuti Utami does the research, in her correlation research designs, she rises up the problem about the difficulties of the students of MTS Bustānul Ulum in writing a short paragraph, because of the classical method that is used by the teacher there, and she wants to use the other method is that using picture in teaching writing technique.

Based on the analyzed is done by Hastuti Utami, she found the result of the research that there is a significant influence between the using pictures in teaching writing in short paragraph toward students' writing achievement at the second year students of MTS Bustanul ulum Pekanbaru.

At the last of the research, Hastuti Utami draws the conclusions and suggestions for the teachers at MTS Bustanul Ulum Pekanbaru, they are:

1. The students' achievement in writing short paragraph by using picture is enough, where the average score is 72.
2. The first hypothesis is accepted. It means that there is significant different on the achievement of writing for those students who are thought by the media at MTS Bustanul Ulum Pekanbaru.

She gave the suggestions for the teacher at MTS Bustanul Ulum Pekanbaru where teacher should keep the different techniques in teaching and learning process. The teachers are suggested to rising up the students' interest in studying English and making them easy to understand about the lesson by using various techniques.

The other research is done by Yanti Yushal entitled: *"The Influence of Using Picture Series in Teaching Speaking toward Students' Speaking Achievement at Second Year Students of MAN Rengat"*. She designs her research as a correlation research design, or the other words the correlation between picture series and students' speaking achievement. She started her research from a problem is that the difficulties of the students in speaking English since they

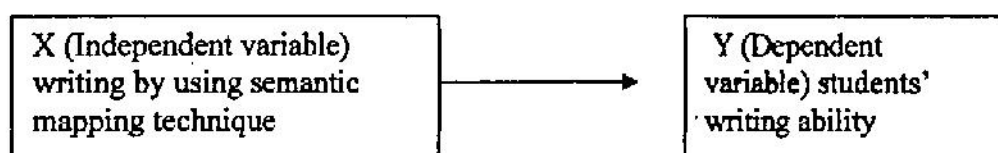
have no ideas to represent in their speaking, even they are not creative, and not good at inspiring ideas in speaking. So, she is interested in carrying out other techniques to improve student's ideas to be creative. Based on the analyzed above, she founds the result of the research is that there is a significant influence between using picture series in teaching speaking toward students' achievement at the second year students of MAN Rengat.

At the last of the research, Yanti yushal gives the suggestion and conclusion about her research, she concludes that speaking is a tool for communication and it is activity of presenting thoughts or ideas in spoken language. Therefore, if the students want to master a language, they need the adequate practice in using the language. She also gives the suggestion for the teacher that they should have programs and many things to manage and make the students feel interested in the class. Moreover, a good teacher teaches to create the situation effectively and gives different ways in learning English.

C. The Operational Concept

There are two variables will be investigated in this research, they are variable X is called independent and variable Y is called dependent variable. The independent variable is writing by using semantic mapping technique and dependent variable is students' writing ability. Using score test given to the students indicates the students' writing ability by concerning five components: content, vocabulary, organization, language used, and mechanics.

The correlation of these two variables can be drawn as follows:



The following indicators indicate the semantic mapping technique use:

Variable X is writing by using semantic mapping technique

- a) The students selects a word or concept central to the topic
- b) The students display the target word or concept.
- c) The students generate as many words as possible that relate to the target words.
- d) The students lead the class in a discussion about the words map.
- e) The students create similar word maps.

Variable Y: students writing ability:

- a) The students develop a range of vocabulary
- b) The students identify general idea to be paragraph
- c) The students can make or generate the general ideas
- d) The students can arrange the generated words into good paragraph
- e) The students can edit their paragraph writing by using appropriate mechanic.

Based on Jacobs' theory, the students' writing ability can be seen based on the element of the component of writing, they are as follows:

1. Content

a. Knowledgeable

- 1) Is there understanding of the subject?
- 2) Are facts or other pertinent information used?

b. Substantive

- 1) Are several main points discussed?
- 2) Is there sufficient detail?

c. Relevant to the topic

- 1) Is all information clearly pertinent to the topic?
- 2) Is extraneous material excluded?

2. Organization

a. Fluent expression

- 1) Do the ideas flow, building on one another?
- 2) Are there introductory and concluding paragraph?

b. Ideas clearly stated

- 1) Is there a clearly stated controlling idea or central focus to the paragraph?

c. Well-organized

- 1) Is there overall relationship of ideas?

d. Logical sequencing

- 1) Do appropriate transitional markers indicate this development?

e. Cohesive

- 1) Does paragraph reflect a single purpose?

3. Vocabulary

a. Effective word

- 1) In the context, which it is used, is the choice of vocabulary accurate?

b. Idiom

- 1) Are the idioms correct? Do they convey the intended meaning?

c. Word choice

- 1) Does word placement give the intended message?

d. Usage

- 1) Is there effective repetition of key words and phrases?

e. Word form

- 1) Are prefixes, suffixes, roots, and compounds used accurately and effectively?

4. Language Use

a. Effective complex contractions

- 1) Are sentences well formed and complete, with appropriate complements?

b. Agreement

- 1) Is there basic agreement between sentence elements: auxiliary verb? Subject-verb? Pronoun-antecedent? Adjective-noun? Noun-quantifiers?

c. Tense

- 1) Are verb tenses correct? Properly sequenced?

d. Number

- 1) Do nouns, pronouns, and verbs convey intended quantity?

e. Word order

- 1) Is each word, phrase, and clause suited to its intended function?

5. Mechanics

a. Spelling

- 1) Are words spelled correctly?

b. Punctuation

- 1) Are periods, commas, semicolons, and dashes, question marks used correctly?

c. Capitalization

- 1) Are capital letter used where necessary and appropriate?

d. Paragraphing

- 1) Are paragraphs intended to indicate when one sequence of thought ends another begins?

e. Handwriting

- 1) Is handwriting easy to read, without impeding communication?

D. The Assumption and Hypothesis

1. The Assumption

Based on the 2007 curriculum KTSP for Senior High School, all of the students have learned writing since the first year. However, in reality, writing becomes a problem for them and they ignore it. Therefore, the researcher assumes that the students who do prewriting, as a pre-assignment, during the assignment and as a post-assignment by using semantic mapping technique use will have a good writing ability.

2. The Hypothesis

Ha: There is a significant influence of the semantic mapping technique use in teaching writing toward students' writing ability.

Ho: There is no significant influence of the semantic mapping technique use in teaching writing toward students' writing ability.



CHAPTER III

RESEARCH METHODOLOGY

A. The Research Design

The control group is needed for comparison or different technique its purpose is to see if the new treatment was more effective than the usual or conventional strategy the teacher use or to see if the new treatment is more effective than other.

This research is to find out, if there is significant influence of using semantic mapping technique, thus this research is designed in a quasi experimental research.

The design of this research is pre-test that is carried out to determine the behaviorism of two classes chosen as sample, and post-test to determine the result that is used as final data for this research. The researcher would choose two classes that had no difference score significantly and after treatment for eight meetings, the researcher gave post-test to obtain the students' writing ability after the treatment.

The teaching used in conducting this research was different from each group. In experimental group (x) treated by using semantic mapping technique, while in control group (y), which is treated without using semantic mapping technique.

According to Suryabrata (2004: 105) this type of research can be designed follow:

Table III. 1

Research Type

Class	Pre-test	Treatment	Post-test
E	T 1	X	T 2
C	T 2		T 2

Note:

E : Experiment Class

C : Control Class

T1: Pre-test to experiment and control class

T2: Post-test to experiment and control class

X : Receive the treatment that is using semantic mapping technique.

B. The Location and Time of the Research

The research was conducted at the second year students of SMAN 2 Rokan IV Koto in academic year 2008-2009. This school is located at Lubuk Bendahara Timur Village, Rokan IV Koto in Rokan Hulu Regency. This study was started on March until July 2009.

C. The Subject and Object of the Research

The subject of this research is the second year student of SMAN 2 Rokan IV Koto, in 2008-2009 academic years, and the object is the influence of semantic mapping technique use on students' writing ability.

D. The Population and Sample of the Research

The population of the research is the second year students of SMAN 2 Rokan IV Koto, which covers 43 students that is divided into two classes. The table of population can be seen below:

Table III.2

The Number of the Second Year Students of SMA 2 Rokan IV Koto

NO	Class	Students		Total
		Male	Female	
1	II IPA	7	13	20
2	II IPS	13	10	23
Total		20	23	43

Taken from: SMAN 2 Rokan IV Koto

In this case, the researcher compares the students writing ability between two classes as sample, they are II IPA and II IPS taught by using different technique. Because this research needed two groups to collect data, they are experiment and control group, the researcher took II IPA became the experiment class and II IPS became the control class.

E. The Data Collection Technique

Test

The data of this test research are the score of the students' writing ability obtained from written test. The test was divided into two types, the first was pre-test and it was given before the treatment. The second is post-test intended to obtain the students writing ability at the second year of SMAN 2 Rokan IV Koto. The data collecting technique is an important rule in conducting a research for the result validity.

In order to avoid the influence of teacher point of view, both groups will be taught by the same teacher. In the case, the writer as a teacher at the time, taught the students in different techniques. However, it's taught the same writing material. The teaching procedures of both techniques are as follows:

1. The teaching procedure for experimental group:
 - a. Greeting
 - b. For the first meeting, the teacher introduces the technique will be used in teaching writing.
 - c. The teacher makes mapping or graphics on the write board, and then writes the topic into the central of the mapping.
 - d. Ask the students to look for some key words, which are related to the topic as supporting words.
 - e. The teacher puts the key words into mapping or graphics.

- f. Ask the students to create the words in the mapping to become coherent sentences in the descriptive paragraph.

2. The teaching procedure for control group:

- a. Greeting
- b. For the first meeting, the teacher introduces the technique will be used in teaching writing.
- c. The teacher gives the students some explanations about the topic.
- d. The teacher gives the students explanations about how to write a descriptive paragraph.
- e. The students are asked to make a descriptive paragraph based on the topic given.

After the last meeting, the researcher gave post-test for both classes, experiment and control class. The purpose of this test is to find out how the influence toward writing ability of the students that had been taught through semantic mapping technique use.

Based on Jacobs' theory (1991: 92-96) the criteria of writing which are presented as the profile, as namely: content, organization, vocabulary, language used, and mechanics. They have typical skills where its component has the asset of qualities (Level) to be rated and series of possible writing, Jacobs' theory rating as follows:

1. Content

TABLE III.3

Content

SCORE	LEVEL	CRITERIA
30-27	Excellent to very good	Knowledgeable, substantive, relevant
26-22	Good to average	Some knowledge, adequate range, limited development, mostly relevant
21-17	Fair to poor	Limited knowledge, little substance, inadequate development
16-13	Very poor	Does not show the knowledge, non substantive, not pertinent

2. Organization

TABLE III.4

Organization

SCORE	LEVEL	CRITERIA
20-18	Excellent to very good	Fluent expression, ideas clearly, logical
17-14	Good to average	Somewhat choppy, loosely organize, limited support
13-10	Fair to poor	Non-fluent, idea confuse, lack logical
9-7	Very poor	Doesn't communicate, not organization

3. Vocabulary

TABLE III.5

Vocabulary

SCORE	LEVEL	CRITERIA
20-18	Excellent to very good	Suppllicated range, affective word, word form mastery
17-14	Good to average	Adequate range, occasional error, meaning not absurd
13-10	Fair to poor	Limited range, frequent error, or not enough
9-7	Very poor	Essential translation, little knowledge

4. Language Use

TABLE III.6

Language Use

SCORE	LEVEL	CRITERIA
25-22	Excellent to very good	Effective complex, few error.
21-18	Good to average	Simple construction minor problem
17-11	Fair to poor	Major problem, meaning confuse
10-5	Very poor	No mastery of the sentence, doesn't communicated

5. Mechanics

TABLE III.7
Mechanics

SCORE	LEVEL	CRITERIA
5	Excellent to very good	Demonstrate mastery, few error
4	Good to average	Occasional error, punctuation, paragraphing
3	Fair to poor	Frequent error, poor hand writing, meaning confuse
2	Very poor	No mastery of convention, dominate by error

To collect the data, the researcher used semantic mapping technique. The writing result was evaluated by concerning five components and each component had score/ level. The specific of the test is follows:

TABLE III.8
Writing Skills and Scores

No	Writing Skill	The Highest Score
1	Content	30
2	Organization	20
3	Vocabulary	20
4	Language use	25
5	Mechanics	5

F. The Technique of the Data Analysis

This study aims to compare two different techniques and to find out, if there is significant influence of semantic mapping technique use on students' writing ability. In analyzing the data, the writer use score post-test of the experiment, and control group. Those score are analyzed by using statistical analysis. The different mean in analysis by using T-test formula (Hartono: 193).

$$T_0 = \frac{Mx - My}{\sqrt{\left[\frac{{}^2SDx}{\sqrt{N-1}}\right] + \left[\frac{{}^2SDy}{\sqrt{N-1}}\right]}}$$

Where:

to : The value of t

Mx: Mean score of experimental class

My: Mean score of control class

SDx: The standard deviation of experimental class

SDy: The standard deviation of control class

N : The number of the students

The T-table was employed to see whether there was significant difference between the mean score of both experiment and control group or not. The T-obtained value was consulted with the value of T table at the degree of freedom (df). Its formula is presented as follows:

$$(df) = (N_1 + N_2) - 2$$

Statically hypothesis:

$$H_0 = t_0 < t_{\text{table}}$$

$$H_a = t_0 > t_{\text{table}}$$

Criteria for hypothesis:

1. H_0 is accepted if $t_0 < t_{\text{table}}$ or it can be said that there is no significant influence of using semantic mapping in increasing students' writing ability
2. H_a is accepted if $t_0 > t_{\text{table}}$ meaning that there is significant influence of using semantic mapping in increasing students' writing ability

1. Looking for the Mean of variable X and Y

1. The Mean of variable X

$$M_x = \frac{\sum X}{N}$$

2. The Mean of variable Y

$$M_y = \frac{\sum Y}{N}$$

2. Looking for Standard Deviation of variable X and Y

1. Standard deviation of variable X

$$SD_x = \frac{\sum x^2}{N}$$

2. Standard deviation of variable Y

$$SD_y = \frac{\sum y^2}{N}$$

3. The Reliability the test in Experimental and Control group

$$r_{ii} = \left(\frac{N}{N-1} \right) \left(\frac{1 - m(N-m)}{Nx^2} \right)$$

Where:

r_{ii} : The reliability

N : Number of students

M : The mean score of the test

X^2 : The standard Deviation of the test

The reliability of the test is considered as follow:

0.800-1.0 = Very high

0.600-0.800 = High

0.400-0.600 = Enough

0.200-0.400 = Low

0.00-0.200 = Very Low

(Arikunto, Suharsimi: 1996, 71)

1. The reliability the test in experimental group

$$r_{ii} = \left(\frac{N}{N-1} \right) \left(\frac{1 - m(N-m)}{Nx^2} \right)$$

$$r_{ii} = \left(\frac{20}{20-1} \right) \left(\frac{1 - 53.55(20 - 53.55)}{20(6.06)^2} \right)$$

$$r_{ii} = \frac{20}{19} \left(\frac{1 - (-1796.6)}{734.4} \right)$$

$$r_{ii} = 1.05(1 - (-2.44))$$

$$r_{ii} = 1.05(2.44)$$

$$r_{ii} = 2.56$$

The score obtained (2.56) is compared to “r” table of product moment, at level 5% is 0.950 and 1% is 0.990. Thus, the score obtained is highest than “r” table whether at 5% or 1% ($0.950 < 2.56 > 0.990$). It means that writing test in experiment group is reliable.

2. The reliability of the test in control group

$$r_{ii} = \left(\frac{N}{N-1} \right) \left(\frac{1 - m(N-m)}{Nx^2} \right)$$

$$r_{ii} = \left(\frac{23}{23-1} \right) \left(\frac{1 - 47.74(23 - 47.74)}{23(5.08)^2} \right)$$

$$r_{ii} = \left(\frac{23}{22} \right) \left(\frac{1 - (-1181.08)}{593.54} \right)$$

$$r_{ii} = \left(\frac{23}{22} \right) (1 - (-1.98))$$

$$r_{ii} = (1.04)(1.98)$$

$$r_{ii} = 2.05$$

Then, the score obtained (2.05) is compared to "t" table of product moment, at level 5% is 0.950 and 1% is 0.990. Thus, the score obtained is higher than r table whether at 5% and 1% ($0.950 < 2.05 < 0.990$). It means that writing test in control group is reliable.



CHAPTER IV

THE PRESENTATION OF THE DATA ANALYSIS

A. The Description of the Data

In this chapter the writer present the data in order to find out how the influence toward writing of the students that had been taught through semantic mapping or to know the comparison between different technique.

The data of this research are based on the score of the students' post-test. The researcher gave pre-test before combining with the score after treatment. The data were obtained by giving post-test to the experiment and control group. The writing test consists of one topic and the writing result was evaluated by concerning five components; content, vocabulary, organization, language used, and mechanics. Each component had its score. In this research, the total score of post-test for both of groups is significantly different. The total score of experiment group is 1071 while the highest score is 66 and the lowest score is 45. The total score for control group is 1098 while the highest score is 55 and the lowest score is 40.

1. The Data Presentation

In order to interpret the level of students score in both experiment and control group, the Anas Sudjono's scales is employed (2003:35). The scale is as follows:

TABLE IV.1
The scale of students' writing ability

The score of ability level	Category
80-100	Very Good
66-79	Good
56-65	Enough
46-55	Less
0-45	Fail

TABLE IV.2
The Recapitulation of Pre-Test of Experimental Group
at the Second Year of SMAN 2 Rokan IV Koto

NO	Students	Score		Final score	category
		Reader 1	Reader 2		
1	Student 1	46	36	41	fail
2	Student 2	49	38	44	Fail
3	Student 3	55	45	50	Less
4	Student 4	65	41	53	Less
5	Student 5	53	39	46	Less
6	Student 6	36	36	36	Fail
7	Student 7	35	36	36	Fail
8	Student 8	56	48	52	Less
9	Student 9	45	37	41	Fail
10	Student 10	43	41	42	Fail
11	Student 11	59	43	51	Less
12	Student 12	41	36	39	Fail
13	Student 13	59	54	57	Enough
14	Student 14	62	47	55	Less
15	Student 15	42	36	39	Fail
16	Student 16	34	36	35	Fail
17	Student 17	42	36	39	Fail
18	Student 18	47	36	42	Fail
19	Student 19	48	38	43	Fail
20	Student 20	65	44	55	Less
Total				896	

From the table above, we can know the total score of pre-test for experimental group is 896 while the highest score is 57 and the lowest score is 35. The score was given from two readers; each score is added and divided.

For example:

Reader 1 = 46

Reader 2 = 36

$$= 46 + 36$$

$$= 82: 2 = 41$$

TABLE IV.3
The Recapitulation of Pre-Test of Control Group
at the Second Year of SMAN 2 Rokan IV Koto

NO	Students	score		Final score	Category
		Reader 1	Reader 2		
1	Student 1	44	36	40	Fail
2	Student 2	46	37	42	Fail
3	Student 3	54	40	47	Less
4	Student 4	43	36	40	Fail
5	Student 5	49	37	43	Fail
6	Student 6	46	50	48	Less
7	Student 7	44	36	40	Fail
8	Student 8	39	36	38	Fail
9	Student 9	43	48	46	Less
10	Student 10	53	36	45	Fail
11	Student 11	40	36	38	Fail
12	Student 12	41	36	39	Fail
13	Student 13	58	44	51	Less
14	Student 14	55	44	50	Less
15	Student 15	45	36	41	Fail
16	Student 16	41	37	39	Fail
17	Student 17	42	36	39	Fail
18	Student 18	42	36	39	Fail
19	Student 19	36	36	46	Less
20	Student 20	44	47	48	Less
21	Student 21	44	52	35	Fail
22	Student 22	34	36	38	Fail
23	Student 23	34	42	38	Fail
Total				970	

From the table above, we can know that the total score of pre-test from control group is 970 while the highest score is 48 and the lowest score is 35. The score was given from two readers. Each score is added and divided.

For example:

Reader 1 = 44

Reader 2 = 36

$$= 44 + 36$$

$$= 80 : 2 = 40$$

TABLE IV.4

**The Recapitulation of Post-Test of Experimental Group
At the Second Year of SMAN 2 Rokan IV Koto**

NO	Students	score		Final score	category
		Reader 1	Reader 2		
1	Student 1	56	42	49	Less
2	Student 2	66	58	62	Enough
3	Student 3	55	53	54	Less
4	Student 4	55	48	52	Less
5	Student 5	59	41	50	Less
6	Student 6	53	39	46	Less
7	Student 7	60	48	54	Less
8	Student 8	52	40	46	Less
9	Student 9	66	52	59	Enough
10	Student 10	56	48	52	Less
11	Student 11	63	51	57	Enough
12	Student 12	51	39	45	Fail
13	Student 13	57	42	50	Less
14	Student 14	65	57	61	Enough
15	Student 15	62	54	58	Enough
16	Student 16	58	39	49	Less
17	Student 17	74	52	63	Enough
18	Student 18	63	37	50	Less
19	Student 19	54	41	48	Less
20	Student 20	75	57	66	Enough
Total				1071	

From the table above, we can know the total score of post-test for experimental group is 1071 while the highest score is 66 and the lowest score is 45. The score was given from two readers. Each score is added and divided.

For example:

Reader 1 = 56

Reader 2 = 42

= 56 + 42

= 98: 2 =

TABLE IV.5
The Recapitulation of Post-Test of Control Group
At the Second Year of SMAN 2 Rokan IV Koto

NO	Students	Score		Final score	Category
		Reader 1	Reader 2		
1	Student 1	56	47	52	Less
2	Student 2	48	37	43	Fail
3	Student 3	47	37	42	Fail
4	Student 4	55	43	49	Less
5	Student 5	54	49	52	Less
6	Student 6	54	43	49	Less
7	Student 7	58	51	55	Less
8	Student 8	46	38	42	Fail
9	Student 9	47	40	44	Fail
10	Student 10	54	50	52	Less
11	Student 11	56	52	54	Less
12	Student 12	56	48	52	Less
13	Student 13	56	53	55	Less
14	Student 14	55	48	52	Less
15	Student 15	46	36	41	Fail
16	Student 16	48	36	42	Fail
17	Student 17	47	36	42	Fail
18	Student 18	44	37	41	Fail
19	Student 19	44	36	40	Fail
20	Student 20	53	50	52	Less
21	Student 21	52	39	46	Less
22	Student 22	55	47	51	Less
23	Student 23	53	47	50	Less
Total				1098	

From the table above, we can know the total of post-test for control group is 1098 while the highest score is 55 and lowest score is 40. The score was given from two readers, each score is added and divided.

For example:

Reader 1 = 56

Reader 2 = 47

$$= 56 + 47$$

$$= 103 + 2 = 52$$

TABLE IV.6
The Score of the Students' Writing Ability of the Second Year
At SMAN 2 Rokan IV Koto

NO	Experimental Group		NO	Control Group	
	Pre-test	Post-test		Pre-test	Post-test
1	41	49	1	40	52
2	44	62	2	42	43
3	50	54	3	47	42
4	53	52	4	40	49
5	46	50	5	43	52
6	36	46	6	48	49
7	36	54	7	40	55
8	52	46	8	38	42
9	41	59	9	46	44
10	42	52	10	45	52
11	51	57	11	38	54
12	39	45	12	39	52
13	57	50	13	51	55
14	55	61	14	50	52
15	39	58	15	41	41
16	35	49	16	39	42
17	39	63	17	39	42
18	42	50	18	39	41
19	43	48	19	46	40
20	55	66	20	48	52
			21	35	46
			22	38	51
			23	38	50
Total	896	1071		970	1098

B. The Data Analysis

This section presents the statistical result followed by the discussion about teaching by using semantic mapping technique on students' writing ability at the second year of SMAN 2 Rokan IV Koto. The data are divided into two groups, they are experiment and control groups score. To analysis the data in

chapter III, the following statically formula is used to get the main score (M) and the standard deviation (SD). The result both of mean score and standard deviation were done by using the formula:

$$M_x = \frac{\sum X}{N} \quad \text{The formula for experimental group}$$

$$M_y = \frac{\sum Y}{N} \quad \text{The formula for control group}$$

The formula for standard deviation

$$SD_x = \frac{\sum x^2}{N} \quad \text{The formula deviation for experimental group}$$

$$SD_y = \frac{\sum y^2}{N} \quad \text{The formula of deviation for control group}$$

The data analysis of the students for experiment and control group reveals information as showed in the following table:

TABLE IV.7

Mean and Standard Deviation

	Experimental group		Control group	
	Pre-test	Post-test	Pre-test	Post-test
M	44.80	53.55	42.17	47.73
SD		6.06		5.08
The percentage	20.45 %		11.90 %	

From the table above, it can be seen that there is a difference of the mean score, the standard deviation and the percentage between experiment and control group where the percentage from the pre-test to post-test of experiment group increasing to 20.45 % while the percentage from pre-test to post-test of control group is increasing, 11.90 %. It can be seen from the following formula:

$$= \frac{53 - 44}{44} \times 100\% = \frac{9}{44} \times 100\% = 20.45\%$$

$$= \frac{47 - 42}{42} \times 100\% = \frac{5}{42} \times 100\% = 11.90\%$$

TABLE IV.8
Table Mean and Standard Deviation

NO	Score		X	Y	X ²	Y ²
	X ₁	Y ₂				
1	49	52	-4.55	4.26	20.70	18.14
2	62	43	8.45	-4.74	71.40	22.46
3	54	42	0.45	-5.74	0.20	32.94
4	52	49	-1.55	1.26	2.40	1.58
5	50	52	-3.55	4.26	12.60	18.14
6	46	49	-7.55	1.26	57.00	1.58
7	54	55	0.45	7.26	0.20	52.70
8	46	42	-7.55	-5.74	57.00	32.94
9	59	44	5.45	-3.74	29.70	13.98
10	52	52	-1.55	4.26	2.40	18.14
11	57	54	3.45	6.26	11.90	39.18
12	45	52	-8.55	4.26	73.10	18.14
13	50	55	-3.55	7.26	12.60	52.70
14	61	52	7.45	4.26	55.50	18.14
15	58	41	4.45	-6.74	19.80	45.42
16	49	42	-4.55	-5.74	20.70	32.94
17	63	42	9.45	-5.74	89.30	32.94
18	50	41	-3.55	-6.74	12.60	45.42
19	48	40	-5.55	-7.74	30.80	59.90
20	66	52	12.45	4.26	155	18.14
21		46		-7.74		3.02
22		51		3.26		10.62
23		50		2.26		5.10
total	1071	1098			734.90	594.26

X= Experimental group

Y= Control group

$$M_x = \frac{\sum X}{N} = \frac{1071}{20} = 53.55$$

$$M_y = \frac{\sum Y}{N} = \frac{1098}{23} = 47.74$$

$$SD_x = \frac{\sqrt{\sum x^2}}{N} = \frac{\sqrt{734.9}}{20} = \sqrt{36.74} = 6.06$$

$$SD_y = \frac{\sqrt{\sum y^2}}{N} = \frac{\sqrt{594.26}}{23} = \sqrt{25.83} = 5.08$$

$$t_o = \frac{M_x - M_y}{\sqrt{\left(\frac{SD_x}{\sqrt{N-1}}\right)^2 + \left(\frac{SD_y}{\sqrt{N-1}}\right)^2}}$$

$$t_o = \frac{5.81}{\sqrt{\left(\frac{6.06}{4.35}\right)^2 + \left(\frac{5.08}{4.69}\right)^2}}$$

$$t_o = \frac{5.81}{\sqrt{(1.39)^2 + (1.08)^2}}$$

$$t_o = \frac{5.81}{\sqrt{1.93 + 1.16}}$$

$$t_o = \frac{5.81}{\sqrt{3.09}} = \frac{5.81}{1.75}$$

$$t_o = 3.32$$

The t-computed was 3.32. It means H_0 is rejected and H_a is accepted, because t-obtained was bigger than null. In other words, there is a significant influence of semantic mapping technique in increasing students' writing ability at the second years of SMAN 2 Rokan IV Koto.

By observing data analysis, it can be described that the coefficient of T-test is 3.32. And to prove whether any significant influence or not at 5 % grade of significance, or at 1 % grade of significance. The level of T-test = 3.32. So, the score can be compared with the degree of freedom (df). Then, to get the level of “df” the researcher uses the following formula:

$$\begin{aligned} df &= (N1+N2)-2 \\ &= (20 + 23)-2 \\ &= 43 - 2 \\ &= 41 \end{aligned}$$

The degree of freedom is 41. The T- table at 5 % grade of significance is 2.02, while the level of significance at 1 % is 2.72. So, we can analyze that t_o is higher than t- table at 5% or 1 %. Or the other word, we can read that $2.02 < 3.32 > 2.72$.

From the score above, the researcher can conclude that the first hypothesis can be accepted and it means that there is significance influence of semantic mapping technique in increasing students' writing ability at the second year of SMAN 2 Rokan IV Koto.



CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

Writing is one the language skills that should be mastered by the students in English language learning. Because writing is the tool to present the idea thought written language. Besides, the students should be mastered about grammar, vocabulary, spelling, word formation and others. So, if the students want to master a language, they need adequate practices in using language itself.

In teaching learning process, there are many aspects that can influence the students in the class. One of them is teacher. The teacher should have program or technique to control and make the students not worried and bored in the class or the words a teacher gives is to create the comfortable situation and effective ways and give different ways in learning English, for example, using semantic mapping technique in teaching writing. Semantic mapping techniques have good purpose as follows:

1. To give motivation to students in order to practice their writing.
2. To encourage the students for their critical thinking.
3. To enhance students having the creative skills.
4. To enhance students' comprehension skills.

Based on the data analysis, the researcher can conclude the research as follows:

1. The students' writing ability by using semantic mapping technique is increasing, 20.45 %.
2. The first hypothesis is accepted and it means that there is significant influence of using semantic mapping technique in increasing students' writing ability at the second year of SMAN 2 Rokan IV Koto.
3. The percentage of the students' writing ability for those students who are taught by using semantic mapping technique and those students who are not in SMAN 2 Rokan IV Koto is 20.45% and 11.90%. It means that there is significant influence of using semantic mapping technique in increasing students' writing ability.

B. Suggestion

1. The Teacher

- a. The teacher should apply semantic mapping techniques because it is a good technique for teaching writing.
- b. The teacher should give motivation to students in order to practice their writing. Before write a descriptive paragraph the teacher make diagram in the semantic mapping technique the implementation as follows:
 - The teacher select a word or concept central to the topic

- The teacher display the target words or concept
 - The teacher generates as many words as possible that relate to the target words.
 - The teacher leads the class in a discussion about the words map
 - The teacher then asks students to create similar words maps.
- c. The teacher should give writing test to students.

2. The Students

- a. The researcher suggests to students especially for the second year students of SMAN 2 Rokan should always improve their writing.
- b. The students should practice their English writing.
- c. The students should not be afraid of making mistakes in English writing because it can be improved through frequent writing exercises.

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